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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,161	04/26/2001	Hidetaka Iwai	206580US0	6889
22850 7590 04/05/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER YU, GINA C	
			ART UNIT	PAPER NUMBER
			1617	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		04/05/2007	ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/05/2007.

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**Office Action Summary**

Application No.

09/842,161

Applicant(s)

IWAI ET AL.

Examiner

Gina C. Yu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. \*
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/06/06
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 32-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32-34 and 37-50 is/are rejected.
- 7) ☒ Claim(s) 35 and 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date 20070312, 20070305
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Receipt is acknowledged of amendment filed on November 6, 2006.

The finality of the previous Office action dated June 5, 2006 has been withdrawn in view of applicants' remarks. The new claims have been entered, and claims 32-50 are pending. Claim rejections made in the previous Office action are withdrawn in view of the claim cancellation made by applicants. New rejections are made as following.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**Claims 32-34, 37-42, 45-48, 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (JP 63-126542).**

Yu teaches transparent oil-in-water microemulsions containing hydrophilic ionic surfactants and oil components used for pharmaceuticals and cosmetics. See English Translation, p. 2, lines 1 –17; p. 7, lines, 9-10; instant claim 47, The reference teaches that the ratio of the nonionic surfactant to the oil ingredients in the invention may range from 1:05 to 1:10, and the emulsified particle size is 0.01-0.1 microns. See p. 4, lines 11-12. The application of the invention, such as liquid detergent, shampoo, hair tonic, etc, are disclosed in p. 7, lines 19-24. See instant claim 48. The oils of instant claim 39, such as liquid paraffin, are taught on p. 5, bridging par. See instant claim 39.

The reference teaches anionic surfactants, cationic, amphiphilic surfactants, or mixture of thereof in p. 4, line 12 – p. 5, line 5. See instant claims 11-13. The reference teaches N-acylglutamic acid salts and specifically teaches monosodium N-lauroyl

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glutamate, disodium N-stearoyl glutamate, monosodium N-myristearyl-L-glutamate.

See p. 4, fifth paragraph; instant claims 32 and 34. Stearyltrimethylammonium chloride is taught in p. 4, the last full par. See instant claim 37. Adding hydrophilic alcohols is taught in col. 7, lines 14-25. Example 31 shows a transparent hair care composition comprising 12 % by weight of liquid paraffin, 70% of water, and 10 % of propylene alcohol. See instant claims 38-42.

While N-stearoyl-N-methyltaurine sodium salt (C18) is not specifically taught, the limitation is viewed obvious because the reference teaches N-myristoyl-N-methyltaurine sodium salt (C14). See p. 4, 4<sup>th</sup> par; instant claims 32. Examiner views that a skilled artisan would have had a motivation to substitute one type of higher fatty acid amide sulfonic acid salt for the other in expectation of successfully producing a similarly stable microemulsion.

Although Yu does not disclose specific example formulations having the ratio of oil to hydrophilic surfactants that is "more than 11.67", the ratio of 10:1 is taught by the reference. Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." See In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The Yu reference teaches making a stable and transparent microemulsion with the nonionic surfactants recited by applicants and the oil: nonionic surfactant that is close to the applicants' range. Also taught are the various

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organic and silicone oils that can be used alone or mixed in the oil phase, in an amount up to 60 % wt. Given these conditions, a skilled artisan would have found an optimal ratio between oil and hydrophilic surfactant ratio by routine experimentations.

As for claim 50, the process limitations are obvious in view of the Yu reference teaching, in p. 7, lines 4- 8, to use a high pressure homogenizer or ultrasound emulsifying machine to produce strong shear stress of 400 atm or higher, or preferably of 600 atm or higher at a temperature below 50 °C. Examiner takes the position that employing the prior art equipments would obviously produce the shearing rate of the instant claims, unless proven otherwise. Claims 45 and 46 are product-by-process claims, thus the process limitations are not given patentable weight.

**Claims 43, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu as applied to claims 32-34, 37-42, 45-48, 50 above, and further in view of Drapier et al. (US 6121228) ("Drapier").**

Yu further teaches that while liquid oils are preferred, oils in solid state may be used if they become liquid when mixed, suggesting mixing liquid and solid fatty components. See p. 5, line 6 – p. 6, last line. See also Tables for high alcohols, such as isostearyl alcohol, showing satisfactory transparent microemulsions. See instant claims 43 and 44.

The Yu reference fails to teach an example of composition having both solid and liquid oil with specific viscosity.

Drapier teaches water-in-oil microemulsion liquid detergent having viscosity ranging from 6-300 milliPascal. See col. 4, lines 47 – 67; col.14, lines 17 - 26.

Given the teaching in Yu that the both liquid and solid oils may be used for variety of microemulsion applications such as liquid detergents, and the teaching that thickening agents may be added in the compositions, it would have been obvious to one having ordinary skill in the art to have expected successfully producing a product having desired viscosity by routine experimentations. The routineer who contemplates to formulate the liquid detergent according to Yu would have been motivated to adjust the viscosity as taught by Drapier.

**Claims 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (JP 63-126542) as applied to claims 32-34, 37-42, 45-48, 50 above, and further in view of Flick (Cosmetics Additives, 1991).**

While Yu teaches to incorporate thickeners in to the microemulsions, the reference does not specifically teach the types of thickeners.

Flick teaches that gum tragacantj, a water-soluble polysaccharide, is an emulsifier, renders viscosity, and is used to make shampoo and conditioner. See p. 777.

It would have been obvious to one of ordinary skill in the art to modify the composition of Yu by incorporating water-soluble polysaccharide, as motivated by Flick, because 1) Yu teaches adding thickeners to the microemulsions, and an application of the microemulsion in making shampoos, and 2) Flick teaches that water soluble polymers such as gum tragacanth has medium viscosity and used in making shampoos and conditioner. The skilled artisan would have had a reasonable expectation of successfully producing a stable shampoos or conditioners.

***Allowable Subject Matter***

Claims 35 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments filed on November 6, 2006 have been fully considered but they are not persuasive.

Applicants argue that there is no motivation to alter the prior art ratio of components oil and surfactant, and asks whether the prior art specifically teaches to optimize the ratio to obtain a transparent stable emulsion. As applicants are well aware, the rationale for the rejection is the obviousness of discovering optimum weight amount of the components by routine experimentation. Applicants further argue that decreasing the amount of surfactant is not taught as a results-effective variable. In response, examiner respectfully asserts that the results-effective parameter employed in the Yu invention may not be expressed in terms of the amount of the oil and the surfactant, but the reference does indicate that the solubility of the oil affects the transparency of the emulsion. See pp. 2-3, Prior Arts. It is also noted that in the process of making the present invention, applicants also employ heating the oily material to increase the solubility of the oil, which makes it obvious that using less surfactants to solubilize the oily material is still possible. The reference also sets forth as the problem to be solved by the invention as using a large quantity of oils and small quantity of surfactants to make a stable emulsion. See p. 3, second full par. Thus examiner views that it would

have been obvious that the varying other conditions would alter the amount of surfactants of the microemulsion.

In this case, examiner views that allowability of the proposed amendment depends on factual evidence of the criticality of the weight ratio of B:A above 11.67, as compared to 10 as taught by the reference.

***Conclusion***

Claims 32-34, 37-50 are rejected.

Claims 35 and 36 are objected to.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gina C. Yu whose telephone number is 571-272-8605.



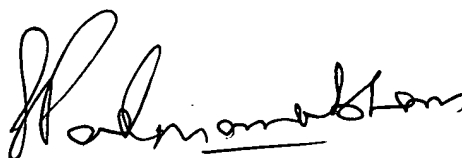
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The examiner can normally be reached on Monday through Friday, from 8:00AM until 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gina Yu  
Patent Examiner



SREENI PADMANABHAN  
PATENT EXAMINER